



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0390; Directorate Identifier 2014-CE-013-AD]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Embraer S.A. Model EMB-505 airplanes that would supersede AD 2013-22-20. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as cracks beyond acceptable limits in the carbon discs of the left hand (LH) and right hand (RH) brake assemblies. We are issuing this proposed AD to require actions to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact EMBRAER S.A., Phenom Maintenance Support, Avenida Brigadeiro Faria Lima, 2170, São José dos Campos – SP, CEP: 12227-901 - PO Box: 36/2, Brasil; telephone: (+55 12) 3927-1000; fax: (+55 12) 3927-6600, ext. 1448; email: phenom.reliability@embraer.com.br; Internet: <http://www.embraerexecutivejets.com/en-US/customer-support/Pages/Service-Center-Network.aspx>.

You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0390; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2014-0390; Directorate Identifier 2014-CE-013-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On October 30, 2013, we issued AD 2013-22-20, Amendment 39-17652 (78 FR 67018; November 8, 2013). That AD required actions intended to address an unsafe condition on Embraer S.A. Model EMB-505 airplanes and was based on mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country.

Since we issued AD 2013-22-20, Amendment 39-17652 (78 FR 67018; November 8, 2013), new service information was published that revised inspection and repair procedures.

The Agência Nacional De Aviação Civil (ANAC), which is the aviation authority for Brazil, issued AD No.: 2014-04-01, dated April 16, 2014 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

This AD was prompted by reports that identified additional locations where inspections and corrective actions on the Left Hand (LH) and Right Hand (RH) brake assemblies are needed. We are issuing this AD to detect cracks beyond acceptable limit in the carbon discs of the brake

assembly, which may result in reduced brake capability and loss of brake parts in the runway.

Since this condition may occur in other airplanes of the same type and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this AD in the indicated time limit without prior notice.

The MCAI requires an inspection to determine if the airplane has the affected part number brake assembly installed and an inspection for cracks of the affected brake assembly with repair or replacement as necessary. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0390.

Relevant Service Information

Embraer S.A. has issued Phenom Service Bulletin No. 505-32-0011, Revision No. 1, dated March 31, 2014. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of the Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD will affect 117 products of U.S. registry. We also estimate that it would take about 2 work-hours per product to comply with Part 1 of the inspection and 3 work-hours per product to comply with Part 2 of the inspection requirements of this proposed AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$19,890, or \$170 per product for Part 1 of the inspection, and \$29,835, or \$255 per product for Part 2 of the inspection.

In addition, we estimate that any necessary follow-on actions would take 1.5 work-hours and require parts costing \$2,405, for a cost of \$2532.50 per product per side for repair or 3 work-hours and require parts costing \$26,177, for a cost of \$26,432 per product per side for replacement.

We have no way of determining the number of products that may need these actions.

According to the manufacturer, all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. Amend § 39.13 by removing Amendment 39-17652 (78 FR 67018; November 8, 2013), and adding the following new AD:

Embraer S.A.: Docket No. FAA-2014-0390; Directorate Identifier 2014-CE-013-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2013-22-20, Amendment 39-17652 (78 FR 67018; November 8, 2013).

(c) Applicability

This AD applies to Embraer S.A. Models EMB-505 airplanes, all serial numbers, that are:

- (1) equipped with a part number (P/N) DAP00097-01 or P/N DAP00097-02 brake assembly; and
- (2) certificated in any category.

(d) Subject

Air Transport Association of America (ATA) Code 32: Landing Gear.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as cracks beyond acceptable limits in the carbon discs of the left hand (LH) and right hand (RH) brake assemblies. We are issuing this AD to detect and correct cracking of the stator pressure plate and possible loss of brake parts on the runway, which could result in reduced brake capability and a possible runway excursion.

(f) Actions and Compliance

Unless already done, do the following actions in paragraphs (f)(1) through (f)(14) of this AD, including all subparagraphs.

- (1) If the number of cycles is unknown, calculate the compliance times of cycles in this AD by multiplying the number of hours time-in-service (TIS) on the brake

assembly by .71 to come up with the number of cycles. For the purposes of this AD, some examples are below:

(i) 500 hours TIS equates to 355 cycles; and

(ii) 12 hours equates to 9 cycles.

(2) Do a general visual inspection (GVI) for cracks in the stator pressure plate on both the LH and RH brake assemblies following Part 1 of the Accomplishment Instructions in Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014. Use the compliance times in paragraphs (f)(2)(i) and (f)(2)(ii) of this AD:

(i) For brake assemblies with 300 flight cycles or less since new or since the last overhaul: Before or upon accumulating 150 flight cycles after the effective date of this AD or within the next 30 flight cycles after the effective date of this AD, whichever occurs later, and repetitively thereafter at intervals not to exceed 60 flight cycles or the next tire change, whichever occurs first.

(ii) For brake assemblies with more than 300 flight cycles since new or since the last overhaul: Within the next 10 flight cycles after the effective date of this AD, and repetitively thereafter at intervals not to exceed 60 flight cycles or the next tire change, whichever occurs first.

(3) If no cracks are found during any of the inspections required in paragraph (f)(2) of this AD, continue the repetitive inspection intervals required in paragraph (f)(2) of this AD, including all subparagraphs.

(4) If any crack is found in the stator pressure plate during any of the inspections required in paragraph (f)(2) of this AD, before further flight, do a detailed inspection (DET) following Part 1 of the Accomplishment Instructions in Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014.

(5) If no cracks beyond the acceptable limits are found during the DET required in paragraph (f)(4) of this AD, continue the repetitive inspection intervals required in paragraph (f)(2) of this AD, including all subparagraphs.

(6) If cracks that exceed the acceptable limits are found during the DET required in paragraph (f)(4) of this AD, before further flight, repair the brake assembly following Appendix 2 of Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014; or replace the brake assembly with a brake assembly that has been inspected and found free of cracks that exceed the acceptable limits following the Accomplishment Instructions of Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014.

Note 1 to paragraph (f)(6) of this AD: Appendix 2 of Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014, includes Meggitt Aircraft Braking System Service Bulletin No. SB-32-1625, Revision A, dated October 17, 2013.

(7) At the next tire change or 30 days after the effective date of this AD, whichever occurs later, do a DET for cracks on the external visible surface of the thrust stator, double stator, and rotors following Part 2 of the Accomplishment Instructions in Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014.

(8) If no crack is detected or if any crack within the acceptable limits shown in Figure 4 Detail G of Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014, is detected in the inspection required in paragraph (f)(7) of this AD, repeat the inspection required by paragraph (f)(7) of this AD at each tire change or at each maintenance action that requires wheel removal, whichever occurs first.

(9) If any crack within the acceptable limits shown in Figure 4 Detail H of Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014, is detected in the inspection required in paragraph (f)(7) of this AD, the affected brake assembly must be replaced within 40 flight cycles.

(10) If any crack beyond the acceptable limits shown in Figure 4 Detail H of Embraer Phenom Service Bulletin No. 505-32-0011, Revision 01, dated March 31, 2014, is detected, the affected brake assembly must be replaced before the next flight.

(11) After any repair or replacement of the brake assembly, the brake assembly P/N DAP00097-01 or P/N DAP00097-02 is subject to the inspections required in paragraphs (f)(2) through (f)(10), including all subparagraphs, of this AD.

(12) For the purposes of this AD, a GVI is a visual examination of an interior or exterior area, installation or assembly, to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance, unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light. It may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked.

(13) For the purposes of this AD, a DET is an intensive examination of a specific item, installation or assembly, to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate access procedures may be required.

(14) As of November 8, 2013 (the effective the date of AD 2013-22-20) and to the effective date of this AD, do not install on any airplane a brake assembly P/N DAP00097-01 or P/N DAP00097-02 unless it is inspected per the requirements of AD 2013-22-20 and continues to be crack free or the cracks do not exceed the allowable limits; and as of the effective date of this AD, do not install on any airplane a brake assembly P/N DAP00097-01 or P/N DAP00097-02 unless it is inspected per the requirements of this AD and continues to be crack free or the cracks do not exceed the allowable limits.

(g) Credit for Actions Done Following Previous Service Information

This AD provides credit for the inspections required in paragraphs (f)(2) and (f)(6) of this AD, if those actions were performed before the effective date of this AD, using Embraer Alert Service Bulletin (ASB) 505-32-A011, original issue, dated September 13, 2013; Embraer Alert Service Bulletin (ASB) 505-32-A011, Revision 01, dated November 01, 2013; Embraer Alert Service Bulletin (ASB) 505-32-A011, Revision 02, dated December 19, 2013; or Embraer Phenom Service Bulletin No. 505-32-0011, original issue, dated February 11, 2014.

(h) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) **Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) **Reporting Requirements:** For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of

information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(i) Related Information

Refer to MCAI Agência Nacional De Aviação Civil (ANAC) AD No.: 2014-04-01, dated April 16, 2014, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0390. For service information related to this AD, contact EMBRAER S.A., Phenom Maintenance Support, Avenida Brigadeiro Faria Lima, 2170, São José dos Campos – SP, CEP: 12227-901 - PO Box: 36/2, Brasil; telephone: (+55 12) 3927-1000; fax: (+55 12) 3927-6600, ext. 1448; email: phenom.reliability@embraer.com.br; Internet: <http://www.embraerexecutivejets.com/en-US/customer-support/Pages/Service-Center-Network.aspx>. You may review copies of the referenced service information at the FAA,

Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on June 12, 2014.

Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2014-14324 Filed 06/18/2014 at 8:45 am; Publication Date: 06/19/2014]